

**A Comprehensive Web-Based Solution for Future Voting: Georgia Tech  
HFES Student Chapter Submission to the HFES “Voting System of  
Tomorrow” Competition**

Technical Report GT-HFES-TR-2015-01

Atlanta, GA: Georgia Institute of Technology

Georgia Tech HFES Student Chapter (<http://pwp.gatech.edu/hfes-gt/>)

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**Suggested Citation:** Gable, T. M., McGlynn, S., Chen, D., Preusse, K., Yoo, A., Darling, C., Kazi, S., Schaeffer, L., & Harrington, C. (2015). *A Comprehensive web-based solution for future voting: Georgia Tech HFES Student Chapter submission to the HFES “voting system of tomorrow” competition* (GT-HFES-TR-2015-01). Atlanta, GA: Georgia Institute of Technology, Georgia Tech HFES Student Chapter.

### **Acknowledgments**

The following report was written by members of the Georgia Tech HFES student chapter in response to a call for submissions for a competition to create the “Voting System of Tomorrow” by the national HFES organization. The following report was awarded first place in the academic submission category for this competition at the national meeting in 2014 in Chicago Illinois. The authors would like to recognize Vincent Martin for being our accessibility consultant and our advisor, Dr. Wendy Rogers for her support with the project in addition to the rest of the chapter that helped us along the way. Portions of this work are supported by a National Science Foundation Graduate Research Fellowship (DGE- 1148903).

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## **Introduction**

Voting is one of the most fundamental rights afforded to American citizens and one of the most powerful agents for change in democratic societies. However, the seemingly endless obstacles to voting have stymied Americans far too often, whether it's the bureaucracy of preparing to vote or difficulties in navigating the ballots themselves. An act as important as voting deserves more investigation than it currently receives and the "Voting System of Tomorrow" competition is a great opportunity to be involved in said research.

The Georgia Tech chapter of the Human Factors and Ergonomics Society (HFES-GT) has taken a holistic and comprehensive approach to overhauling the voting process in the United States. As of right now, much of the existing research on voting in the US focuses on particular steps of the process. While that research is important for solving specific problems, little progress has been made in terms of creating a voting process that is streamlined across all steps and addresses the interactions between steps for voters. In this document and prototype, HFES-GT A) provides a template for how the entire voting process can be designed in a way that leverages human factors principles into an enjoyable and efficient experience for all parties involved and B) describes the process it underwent to find information and create the prototype.

## **Design Process**

### **Determining the Users**

The team decided to target all possible voters with this project, as opposed to making changes that affect just a select portion of the voting public. With this being a competition for designs of the future our team did make an assumption regarding voters in the future, those assumptions being that voters have access to computers and Internet, whether that be at their home, a public library, a post office, or any other government building.

### **User and System Research**

After determining the users, we immersed ourselves into literature on the subject of voting research, both in terms of interfaces and in issues related to voting to find out what had been done before and what researchers have found so far. In parallel to this research we also began to break up the process of voting into a few distinct steps, with the resulting sections being that of voter registration, voter education (how to vote), political education (what to vote), on-site voting (including early voting), and absentee/abroad voting. During this time we determined that we would not focus our attention towards political education, as we did not think a voting system had a direct responsibility to inform voters about candidates' stances (for example), but as is seen in the end, a small amount of this does show up in our system.

Once these parts of the system were determined it was time to look at how the current system approaches these parts of voting. We did this through a number of Hierarchical Task Analyses (HTAs), one for each of the topics we were going to address (voter registration, voter education, on site voting, and absentee/abroad voting). To create these HTAs data was gathered through a number of means including reading articles and documentation on the topics were found and broken down, interviews with voters and voting experts, and through personal

experiences with voting. From these HTAs a number of problem areas for voters became apparent. Our group then discussed each of these problems and attempted to find recommendations where possible. These problems areas were then used as a basis for the rest of our process and were the driving force behind our recommendations and the solution that we created.

### **Solution Brainstorming**

Following the completion of our HTAs and the process of determining the key areas that we needed to address we began the brainstorming stage. This stage consisted of independent brainstorming and group brainstorming sessions for both the specific problem areas and holistic fixes. This large amount of time given to brainstorming allowed the team to come up with a large number of unique and interesting ideas for fixes.

### **Design Selection**

Now that we had an abundance of ideas for solutions to these pain points it was time to narrow them down to determine our recommendations and design our system. In the process of narrowing down our ideas we decided that it would be best to design a system that could have an impact in the near future (instead of far into the future). The solution we decided on was a secure website that provides voters with a simple and easy-to-access location for information, help, and the necessary links to perform all actions associated with voting. We decided that through using a website as the basis for our design it would allow parts of it to be almost fully implementable with today's technology, and then this system could be updated and added to as technology and internet security increases and allows for the application of our other ideas. This ability of partial, immediate implementation was brought about through our desire to design for online voting, which we thought could be possible in the near future once security for such purposes is

created. Online voting also solves many of the issues that come with in-person voting today (under the assumption of all voters having Internet access) such as getting to the locations, waiting in lines, making time in people's schedules, and others.

### **Prototyping**

As soon as the design basis and objectives for the website were determined we began the initial prototyping phase. This phase had an initial portion where we attempted to determine exactly what should be on the website. This was decided based on previously-determined problem areas as well as information that we determined as vital to the voting experience (as seen through our previous HTAs). Once this information was determined we organized it in a logical manner as most of it was still grouped in the main areas we had previously investigated (voter registration, voter education, on site voting, and absentee/abroad voting). It was also at this time that we had decided that some information regarding political education (what to vote) would be best if included as well; however we attempted to limit the information to a basic level. Once we determined the necessary information we planned out a logical menu flow based on readability principles and the use of accessible software. This was important as we made the assumption that those who needed accessibility software would have that installed on their computers, whether it is a screen-reader, magnifier or other software, and we attempted to design the flow of the site to be easily used and understood by such software.

Once the outline of the webpage was determined some of those who were not involved in the process of creating the menu and page flow attempted to do a basic walkthrough and talk-aloud protocol while looking at the basic mockup of the pages. This information helped us to modify some of the structure of the site before beginning more intensive prototyping phases. Once this outline was finalized we shortly discussed the feeling and details of the site before we

began to prototype it. At this point we determined that we would create the prototype based on information for Fulton County Georgia, where Georgia Tech is located; however, in a fully-functional system, this information would be customized based on the voter's state and county of residence. Finally this prototype was shown to people as the development stages went on and changed based on feedback from these walkthroughs and talk-aloud protocols.

### **Prototype and User Workflows**

The prototype website as seen in the video (and in screenshots in Appendix A) is an example of a voting system that incorporates the key recommendations (the title of the next section). The video shows a user named Bob who is voting in Fulton County, Georgia. Users of this system are required to have access to a computer and Internet; those who would prefer not to vote online can still take advantage of all of the website's other offerings. Workflows of these users depend on the form of the interface being discussed. In the modern implementation of the prototype users would be able to navigate to the website and find information regarding registration, topics to be on the ballot for that election, viewing and even practicing on a ballot electronically, and any other information you might need or links for places to do that on the same or external websites. In the future, this website may also include other things such as an online reservation system where you sign up to arrive at a polling location at a certain time, estimated wait times at your location, or even online voting. For more details and to view the website please view the video associated with this document.



## **Key Recommendations**

Based on voting-related research and human factors principles, HFES-GT submits these recommendations to improve the voting experience in the United States.

### **The “one-stop shop”**

People often complain about how the government is too complex, and the process of voting does nothing to disrupt that notion. If the process was made easier, perhaps voter turnout in the US could increase to the levels seen in many other countries. One way to remedy the situation is to create national or state-run websites that people can use to take care of all of their voting needs (see Appendix A for screenshots from this website and view the video to see how a user would interact with the website); that is, after completing all of the steps on this website, a user should be completely ready to show up to his or her polling place on Election Day, wherever it is in the US (and in the future, perhaps even vote directly from the website). This website will allow users to perform basic voting functions such as:

- Registering to vote
- Viewing eligibility requirements
- Filling out change-of-address forms
- Checking whether their IDs are valid
- Requesting assistance at the polling place
- Finding out where to vote (based on current/home location)
- Changing any relevant personal information
- Viewing sample ballots
- Finding information about absentee, early, provisional, and regular voting
- Learning about voters’ rights

HFES-GT also recommends that the voters have access to these website functions to make the voting experience more efficient:

- **Online voter accounts:** To make the voting process more efficient, voters will be able to create website accounts that store relevant information for current and future use. For example, if a voter stores home address information, he or she will be automatically directed to sample ballots for the relevant county and information about the correct polling place. These accounts will be helpful in preventing inter-state problems such as voters being registered in two different states and enhance the effectiveness of programs like Interstate Voter Registration Crosscheck and the Electronic Voter Registration Center. Use of online voter accounts along with the “one-stop shop” national website will also provide the opportunity for election officials to integrate voter registration with other common government processes like naturalization (an interview with the Asian-American Legal Advocacy Center revealed this kind of integration to be potentially helpful) and other government establishments like the Department of Motor Vehicles (DMV). However, use of this feature would not be mandatory because of the concerns that some voters might have about entering private information online.

- **Online reservation system:** Some of the most commonly-heard voting horror stories involve lines that wrap around the block and take hours to move through. If voters are allowed the opportunity to reserve a time slot during which they will show up to vote, polling places can control (to some extent) the number of people showing up at any given time and prepare for periods of higher traffic. Voters who reserve a time slot will also be assured of short waiting periods because they will have lines set up specifically for them at the polling places (much like theme parks use “fast pass” systems) – hopefully this system encourages more voters

to reserve a time slot online, leading to less chaos on Election Day (for voters and for poll workers).

- **Countdown:** Users can access a clock that counts down to Election Day and sends periodic reminders about the approaching election. They will also be able to add the election to their calendars on existing platforms (Google, Outlook, etc.) and set customized reminders as the day approaches.
- **Social media:** When a person performs a function on the website, he or she will be able to post about it on social media with personalizable messages to encourage friends and family to do the same. The website is set up such that posting these messages is just a few clicks away and leads the person's social media friends directly to the website.
- **Traffic help:** If a voter allows the website to access his or her current/home location, Google Maps can help the voter find out the best routes to the assigned polling place and provide alternate routes in case of heavy traffic.
- **Transportation help:** If a voter needs assistance in arriving at a polling location, the “request ride” feature of the prototype enables voters to find other people that could provide transportation help.
- **Live online video feeds of polling places:** The Presidential Commission on Election Administration recommends that states set up video cameras at polling places and stream that video to the public. HFES-GT further recommends that these live feeds be accompanied by estimated wait times, which should be easily calculable with basic queuing theory. For people that cannot RSVP or forget to, these feeds will be useful in helping them plan when to arrive at the polling place.

- **Online voting** (when Internet security is sufficiently advanced): In a country with Internet access available almost everywhere, forcing voters to physically go to polling places almost seems antiquated. However, the Internet, as it stands now, is not quite secure enough to handle a task as important as voting, which would inevitably become a target for hackers. In the future, if Internet security improves, an online voting system would almost certainly improve voter turnout (as it has in pilot programs in other countries) and reduce Election Day hassles. This system could then be hosted in the “one-stop shop” website so that the whole process of voting can be done in one sitting at a computer (or perhaps even on a mobile device).

### **“Line walkers”**

When people wait in line at polling places, they are usually not doing anything productive in terms of preparing to vote. The Presidential Commission on Election Administration has recommended that states hire poll workers to help voters prepare while the voters stand in line. These “line walkers” can bring paperwork around for the voters to fill out, check IDs and answer questions about them, and handle address changes. By the time voters proceed to the check-in table, they should have everything prepared and therefore be able to quickly progress to the voting booth.

### **HF/E-inspired ballot designs**

When systems are not designed using human factors principles, disastrous consequences can sometimes ensue – the 2000 Bush-Gore election was certainly one of those occasions. No matter one’s party affiliation, everyone can agree that the election was unduly influenced because of the confusion caused by the ballot’s “butterfly” design. HFES-GT has designed an electronic ballot with these features and general human factors principles (for a more thorough walkthrough of how the ballot will be used, please see Appendix B):

- **Progress meter:** The ballot uses a dual-screen approach with the voting being done on the right side and a progress meter on the left. This meter shows how many contests the voter has completed, summarizes the votes casted in each contest, and displays the remaining unfinished contests. Voters can also use the meter as a “table of contents” to navigate through contests out of order, if they need to do so. This feature lowers the access cost of important information (recognition over recall) and puts the voter’s progress into larger context.
- **“Finish now”:** Experienced voters might already know, before they arrive at the polling place, which contests they want to vote for and which ones they will abstain from. The “finish now” button enables these voters to end the voting process whenever they want to (Nielsen/Molich “accelerators”). When a voter clicks this button, a pop-up will notify the voter of any unfinished contests, at which point the voter can decide whether to proceed to the formal casting of the ballot or return to those unfinished contests.
- **“Final check”:** In our democracy, casting a vote is an important act that deserves extra attention, especially right when the ballot is about to be formally processed. In this new ballot design, when voters are about to finish up the voting process, a “ballot summary” page will appear to allow voters a final opportunity to see what they voted for in each contest (and hopefully prevent people from making unintended selections).
- **Reversibility of actions:** One of the benefits of using electronic voting systems is that actions are much more easily reversible when compared to those done on paper ballots. For example, if a voter has punched the wrong hole on a paper ballot, he or she will likely need a new ballot to correct this mistake (and also need to redo all of the other contests that were already done correctly). With this ballot design, voters can easily make changes to their votes by simply returning to the contest and clicking their desired option.

- **Accessibility:** Every eligible voter deserves an experience that is catered to his or her needs, which is why this ballot comes equipped with four accessibility features:
  - **Language:** With a simple click of a button at the top of the screen, a voter can change the language of the ballot text to one that best suits his or her needs.
  - **Text size:** The size of the text on the screen can be adjusted by clicking intuitive icons at the top of the screen.
  - **Audio:** Voters with visual impairments will have the option to hear the text on the screen with just the click of an icon (or by prior request).
  - **Screen reader formatting:** Visually-impaired voters will be able to navigate between major sections of the ballot using the “tab” key and make selections using the space bar.
- **Feedback:** Another benefit of using electronic voting is that voters can receive instant feedback on their actions. In this ballot design, green checkmarks appear by the confirmed selection and by the contest in the table of contents (as opposed to paper ballot voting, in which voters can never be sure whether they are correctly logging their votes unless it is checked by a poll worker). When voters make the formal casting of the ballot at the end of the voting process, a confirmation message will alert them to the fact that their ballots have indeed been processed.
- **Consistency:** The physical framework of the ballot stays constant throughout the whole voting procedure, whether it is the locations of the accessibility features, the usage of the dual screens, or the navigation tools. Voters using this ballot will never be confused as to the meaning of actions and icons because they are held constant throughout the entire experience.

The ballot was also designed to adhere to these guidelines from the Brennan Center for Justice (Norden, Kimball, Quesenbery, & Chen, 2008):

- Write instructions in active voice and positive terms
- Provide context of action provided first before the action itself
- Provide explicit instructions for reviewing selections
- Place response options consistently placed on ballot (physical spacing)
- Use bold text for particular information (e.g. office names)
- Put only one contest per screen
- Allow voters to change language, text size, and to get audio support at any time

### **Conclusion**

Voting should be as simple as possible. With this prototype and set of documents, HFES-GT outlines the process of designing an efficient voting system, shows what this system could look like, and provides recommendations for future work in this area. The hope is that a simplified voting system knocks down one of the barriers to greater voting participation numbers in this country and allows everyone to have their voice heard.

### **References**

Norden, L., Kimball, D., Quesenbery, W., & Chen, M. (2008). Better Ballots. New York, NY:

Brennan Center for Justice at NYU School of Law.

Presidential Commission on Election Administration. (2014). The American Voting Experience:

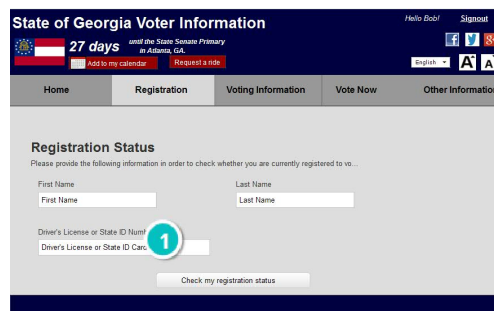
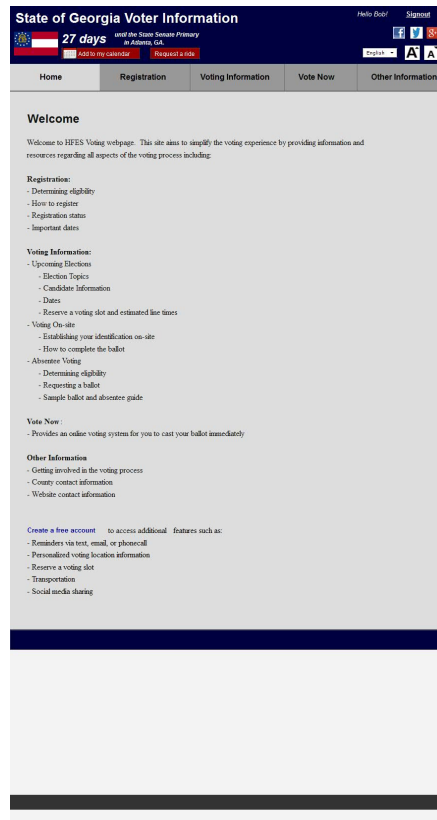
Report and Recommendations of the Presidential Commission on Election

Administration. Robert F. Bauer and Benjamin L. Ginsberg, Co-Chairs.



## Appendix A

## Selected website screenshots



The screenshot shows the 'State of Georgia Voter Information' website. The header includes the state seal, a '27 days' countdown to the 'until the State Senate Primary in Atlanta, GA', and links for 'Add to my calendar' and 'Request a ride'. A navigation bar contains 'Home', 'Registration', 'Voting Information', 'Vote Now', and 'Other Information'. The main content area is titled 'Registration Status' and displays a message: 'Our records show you are not registered to vote.' Below this message is a 'Register to vote' button. The footer indicates '© Georgia 2013'.

The screenshot shows the 'State of Georgia Voter Information' website with the 'Register to Vote' page. The header and navigation bar are identical to the previous screenshot. The main content area is titled 'Register to Vote' and includes a prompt: 'Please review the registration requirements then complete your registration by providing the information below.' The requirements are listed in a table:

Voter Registration Requirements
United States citizen
Legal resident of the county
18 years of age by the election date
Not serving a sentence for conviction of a felony involving moral turpitude
Not been found mentally incompetent by a judge

Below the requirements, the 'Personal Information' section contains fields for First Name, Last Name, Date of Birth (09/09/2014), and Driver's License or State ID Number. The 'Home Address' section includes fields for Street #, City, County (a dropdown menu), and Postal Zip Code. At the bottom, there is a section for 'I swear or affirm:' with two checkboxes: 'I am a citizen of the United States of America' and 'I will be over 18 years of age on or before 62 in day.' A 'Submit Registration Application' button is located at the bottom right.

**State of Georgia Voter Information** Hello Bob! [Signout](#)

**27 days** until the State Senate Primary in Atlanta, GA. [Add to my calendar](#) [Request a ride](#) [English](#) [A](#) [A](#)

[Home](#) [Registration](#) [Voting Information](#) [Vote Now](#) [Other Information](#)

### Register to Vote

Success!

You are now registered to vote.

Your polling place is:  
 Cosby Spear High Rise  
 355 North Avenue NE, Atlanta, GA 30308

**State of Georgia Voter Information** Hello Bob! [Signout](#)

**27 days** until the State Senate Primary in Atlanta, GA. [Add to my calendar](#) [Request a ride](#) [English](#) [A](#) [A](#)

[Home](#) [Registration](#) [Voting Information](#) [Vote Now](#) [Other Information](#)

### Upcoming Elections

Primary Election on March 18th, 2014

[Add to my calendar](#)

Election information

- [Issues](#)
- [Candidates](#)

Candidate Position	Candidate Name	Political Affiliation
Governor	Jim Bob	Republican
Governor	Sally Smith	Democrat
Senator	Jenny Nguyen	Republican
Senator	Paul Greene	Democrat

[Reserve a Voting Slot](#)

By reserving a voting slot, you can use a special line at the polling location and may experience shorter wait times.

If you reserve a voting slot at Cosby Spear High Rise at

9:00 to 9:59 AM

Your expected wait time is approximately 30 minutes.

### Voting

The Following IDs are accepted on Election day:

- State or Federal government issued photo ID including:
  - Voter ID
  - Drivers License
- Federal or local government employee ID
- Valid U.S. passport ID
- Valid U.S. military photo ID

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- If you ID - Provisional Ballot:  
 - Envelope  
 - Your Social Security Number  
 - Provide to election board within 10 days of election

[Click here](#) for a link to a sample ballot (with instructions for completion)

### Absentee Voting

Can't make it to the polls on election? No problem. Georgia is a no-excuse absentee voting state. This means registered voters can apply to vote by mail without requiring an excuse for why they cannot make it to the polls on Election Day. If your application to vote early is approved, you will receive a confirmation email and letter in the mail. You will be notified if your application requires additional information.

If approved, your county registrar will mail you your ballot 45 days prior to the election (Monday, June 18, 2014 for the next election). Follow the directions on the ballot and make sure the ballot is received by Election Day (plan to mail it at least 7 days prior to the election). Military voters and abroad voters, [click here](#) for absentee voting while away from your residence.

You can either [mail your application to vote early](#) or complete it online [here](#).

In order to complete the application you will need your Driver's License ID number or other government issued ID.

If you have additional questions, [contact your county registrar](#).

NOTE: Starting July 1, 2015, you will no longer be required to complete absentee voting applications if voting online. However, if you would prefer a paper ballot be mailed to you, you will still be able to request one online here. Alternatively, you will be able to print a ballot online and mail it in. Receipt of an absentee ballot will also be considered as voter registration.

Rest assured, your identity is kept anonymous. Your envelope and ballot are separated upon receipt.

[Click here](#) for a sample absentee ballot with directions on how to complete the ballot.

The complete guide to absentee voting is available [here](#).

**State of Georgia Voter Information** Hello Bob! [Signout](#)

**27 days** until the State Senate Primary in Atlanta, GA.

[Add to my calendar](#) [Request a ride](#) [English](#) [A](#) [A](#)

[Home](#) [Registration](#) [Voting Information](#) [Vote Now](#) [Other Information](#)

### Get Involved

Want to help with the democratic process?

Volunteers are needed on election day for a variety of tasks, including Greeter, Manager, and Driver. Many duties include a stipend.

[Click here to read more about positions and pay for election day workers.](#)

To become a pool worker in this county you must:

1. Be at least 16 years of age.
2. Be a resident of Fulton County.
3. Successfully complete the required training course. For the next election, training will take place on Thursday July 10, 2014.
4. Be available on election day. For the next election, this is Wednesday, October 15, 2014.
5. If applying to be Manager, you must have worked as a poll worker on at least two previous election days.

[Click here to apply to be a poll worker on election day!](#)

### Contact Your Local Election Office

Your election office is located at:

Office of Elections  
123 Peachtree Street  
Atlanta, GA 12345  
Phone: (555)-555-5555  
Fax: (555)-555-5555  
email: abc123@ga.gov

### Contact Website

[Click here for FAQs](#)

Voter Website  
123 Washington Street  
Washington, DC 12345  
Phone: (555)-555-5555  
Fax: (555)-555-5555  
email: abc123@usa.gov

The “Vote Now” section is not available yet because online voting has not been demonstrated to be a sustainable system yet.

Sample ballot and instructions is seen in Appendix B for easier viewing (next page).

## Appendix B

### Ballot walkthrough

This tutorial will outline the ballot and walk through a sample voting procedure to explain the features of this electronic voting system.

When you are done checking in, you will be assigned to a booth where you can use a touch-screen computer to cast all of your votes. Here is the first screen that you will see upon entering the booth:

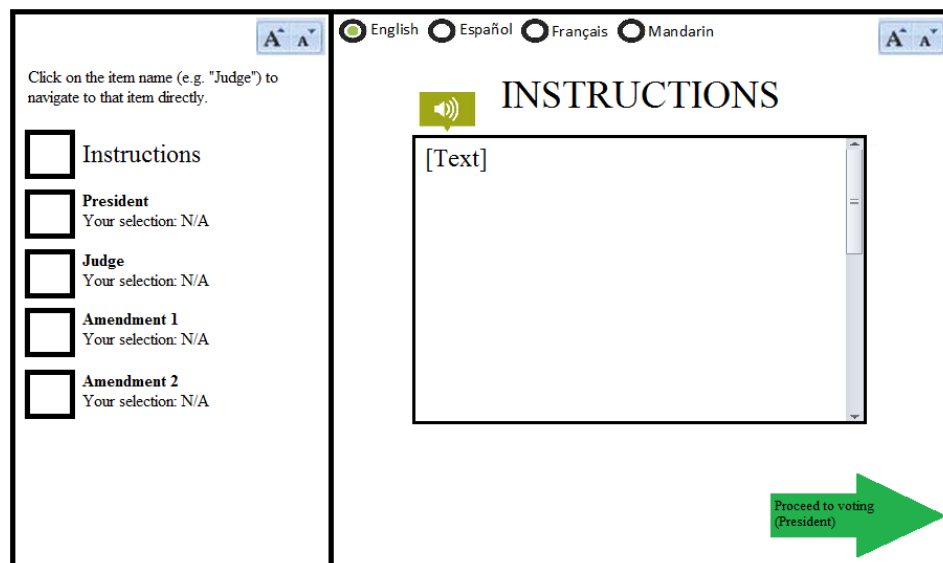


Figure 1

On the left side of the screen is a table of contents that will show you each of the contests on the ballot and summarize your votes as you cast them. This table of contents can also be used as a tool to help you navigate to the particular contest that you would like to vote on (simply touch the name of the office or amendment to be brought to that page).

The right side of the screen (the main screen) will show instructions when you first arrive at the booth and will eventually be used to show each of the contests individually for you to vote on.

This electronic ballot has three accessibility features:

- **Text size:** Increase or decrease the size of text with a simple touch of the “large A” icon or the “small A” icon, respectively. The two sides of the screen are controlled separately, so you can increase the text size on the left without doing so on the right, for example.
- **Language:** In the event that you need the ballot to be presented in a different language, touch the button to the left of the language that you desire and all text will be translated accordingly.

- **Audio:** If you would like text to be read to you, put on the headphones and touch the green microphone icon. The text will be read aloud in the language that you have chosen.

When you are done reading the instructions, touch the green arrow on the bottom-right corner of the screen to proceed to the first contest. The ensuing screen is shown here:

Click on the item name (e.g. "Judge") to navigate to that item directly.

☒ Instructions

☐ **President**  
Your selection: N/A

☐ Judge  
Your selection: N/A

☐ Amendment 1  
Your selection: N/A

☐ Amendment 2  
Your selection: N/A

**FINISH NOW**

English Español Français Mandarin

## PRESIDENT

To vote for the candidate of your choice, touch the button to the left of the candidate's name.

☐ Thomas Whitmore

☐ Judson Moon

☐ Josiah "Jed" Bartlet

☐ James Marshall

☐ Selina Meyer

☐ Write-in (type here):

☐ Abstain

Back to: Instructions

Next item: Judge

Figure 2

When you have completed a part of the ballot (e.g. reading the instructions, casting a vote), that contest will be checked off on the left side of the screen to help you keep track of your progress. In this case, you have just read the instructions and are now on the first voting page – the blue box around the “President” contest (left side) reminds you of the page that you are currently on.

Also on the left side of the screen now is a button labeled “FINISH NOW”. If you have voted in every contest that you would like to vote for and do not wish to continue voting, this button enables you to skip to the last step of confirming your votes and formally casting the ballot.

On the bottom of the right-side screen are arrows that you can use to navigate between contests in the order that they appear on the table of contents (as if you were flipping pages in a book).

For the purposes of this sample voting procedure, imagine that you want to vote for Thomas Whitmore in this presidential race. To make that vote, start by touching the button to the left of his name:

Click on the item name (e.g. "Judge") to navigate to that item directly.

☒ Instructions

☒ **President**  
Your selection: N/A

☐ Judge  
Your selection: N/A

☐ Amendment 1  
Your selection: N/A

☐ Amendment 2  
Your selection: N/A

**FINISH NOW**

English Español Français Mandarin

## PRESIDENT

To vote for the candidate of your choice, touch the button to the left of the candidate's name.

☒ Thomas Whitmore [Confirm vote](#) [Undo vote](#)

☐ Judson Moon

☐ Josiah "Jed" Bartlet

☐ James Marshall

☐ Selina Meyer

☐ Write-in (type here):

☐ Abstain

Back to: Instructions

Next item: Judge

Figure 3

Note: The “Abstain” option is there to help the voting system differentiate between a voter deliberately deciding not to vote in a particular contest or accidentally skipping the item.

Upon doing so, two options pop up: “Confirm vote” or “Undo vote”. If you want to change your mind, touch “Undo vote” and your screen will return to what it looked like in Figure 2 (or simply touch the button next to another candidate’s name). If you indeed want to cast this vote, touch “Confirm vote”. A pop-up will then ask you to confirm the vote:

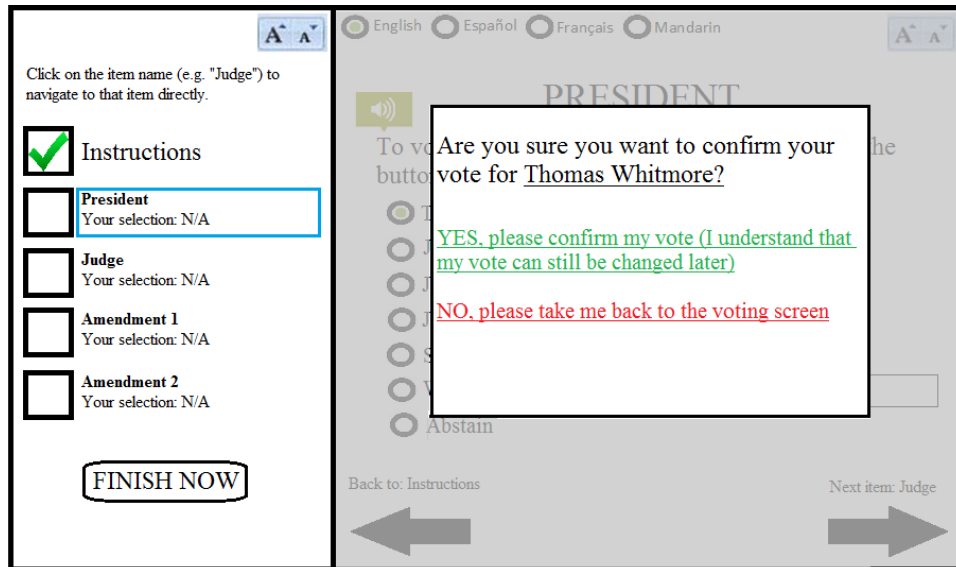


Figure 4

If you are not satisfied with your selection, touch the red link to have your screen return to its Figure 3 state. If you are satisfied with your selection, touch the green link to confirm the vote:

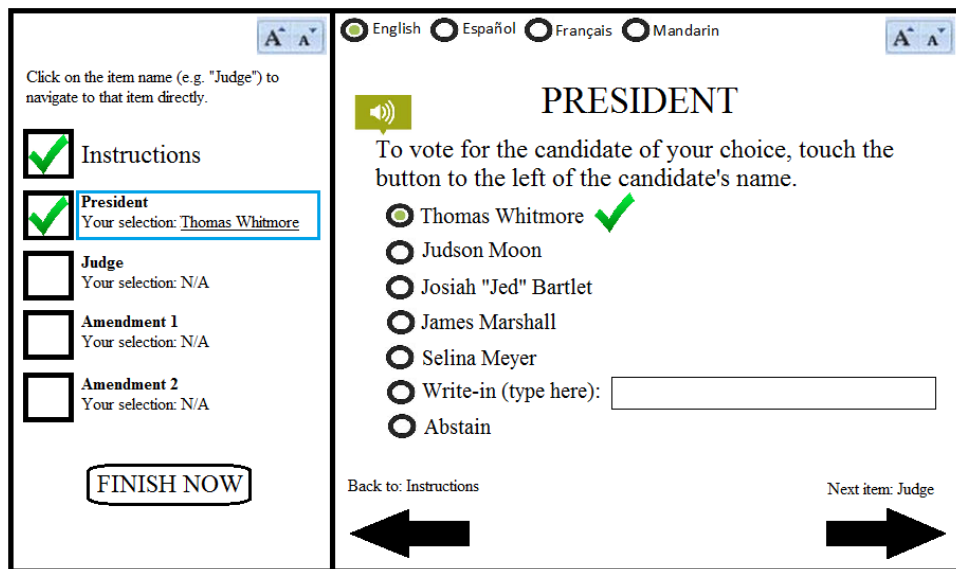


Figure 5

In the table of contents, the “President” box has been checked off and the candidate that you voted for has been listed as well. On the main screen, a check mark has appeared next to the candidate you voted for. At this point, if you wanted to change your vote, you still could by simply touching the button next to another candidate’s name; your screen would again look like the one shown in Figure 3 (but with your new candidate chosen).



When you are ready to continue to the next contest and would like to proceed in the order that the contests are presented, touch the arrow in the bottom-right corner of the main screen (pointing right) labeled “Next item”. You will be brought to the next contest:

Notice that the blue box in the table of contents has moved to the “Judge” contest to reflect where you are in the voting process. For the purpose of demonstration, imagine that you would like to vote for Jeanine; as was the case before, simply touch the button next to the name:

Figure 7

If you touch the bottom-right arrow before confirming your vote, this message will pop up:

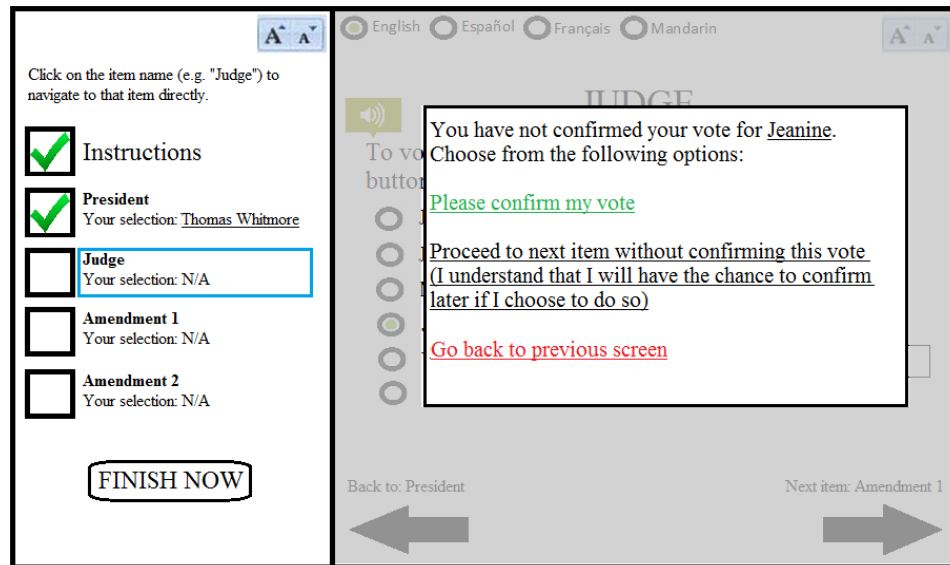


Figure 8

Touching the green link will confirm your vote in the same way that you saw in Figures 4 and 5. If you touch the black link (in the middle), your vote will not be confirmed, but your work will be saved (i.e. if you come back to the “Judge” screen, the candidate that you chose will remain selected). If you touch the red link (at the bottom), your screen will return to its Figure 7 state.

If you decide to proceed without confirming (black link), you will be taken to the next item in the table of contents:

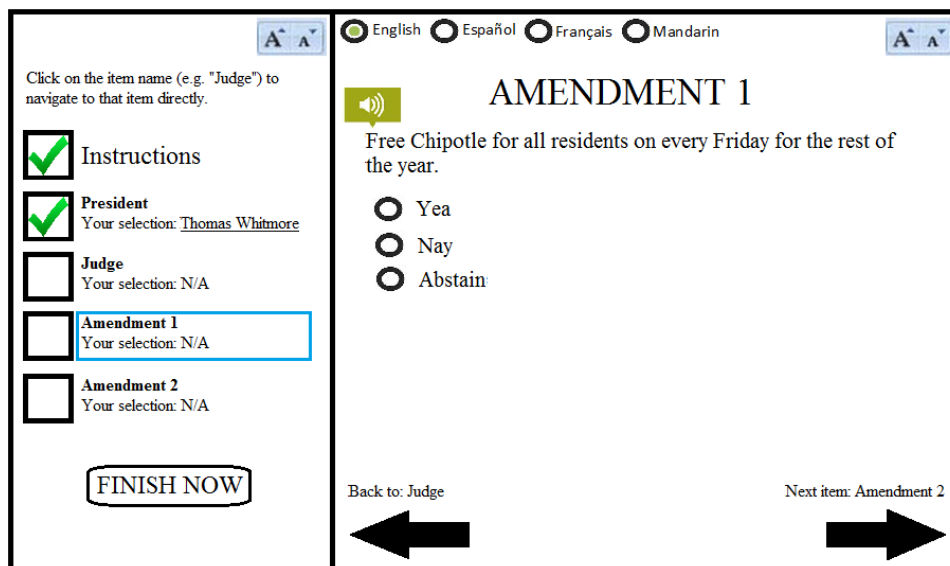


Figure 9

Notice that in the table of contents, the box for the “Judge” contest has not been checked off because you did not confirm the vote (like you did for “President”). However, you can return to “Judge” at any point by simply touching the contest name in the table of contents or scrolling to it by using the black arrows at the bottom of the main screen. Once there, you will be able to perform all of the same functions as you could before.

In the event that you do not wish to vote on a particular contest, you can choose “Abstain”. If your intention is to come back to this contest later, you can simply scroll to another contest using the black arrows at the bottom or by navigating to another contest with the table of contents.

If you have decided that you do not want to vote on this contest (and do not wish to cast a vote on it at all), touch the button next to “Abstain”:

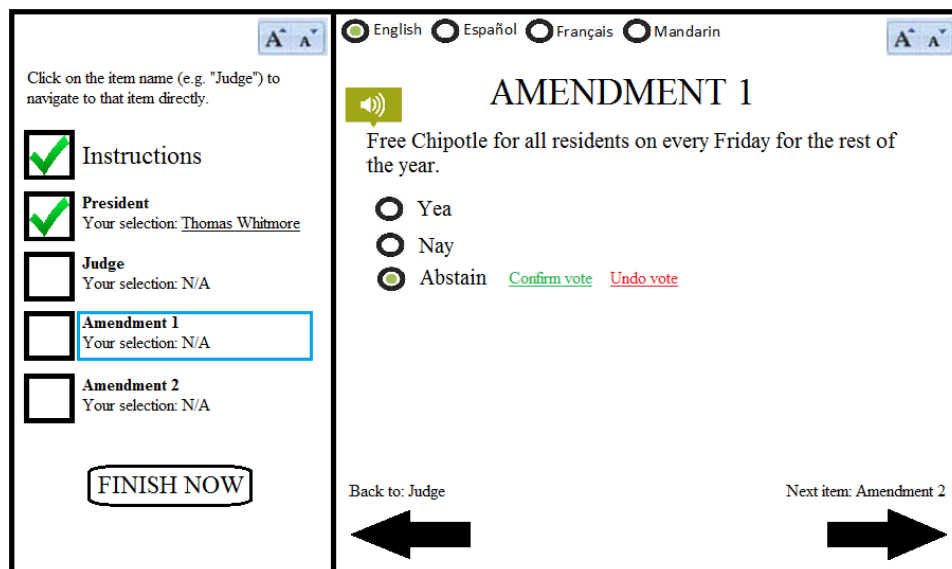


Figure 10

If you want to confirm this vote, touch the “Confirm vote” link:

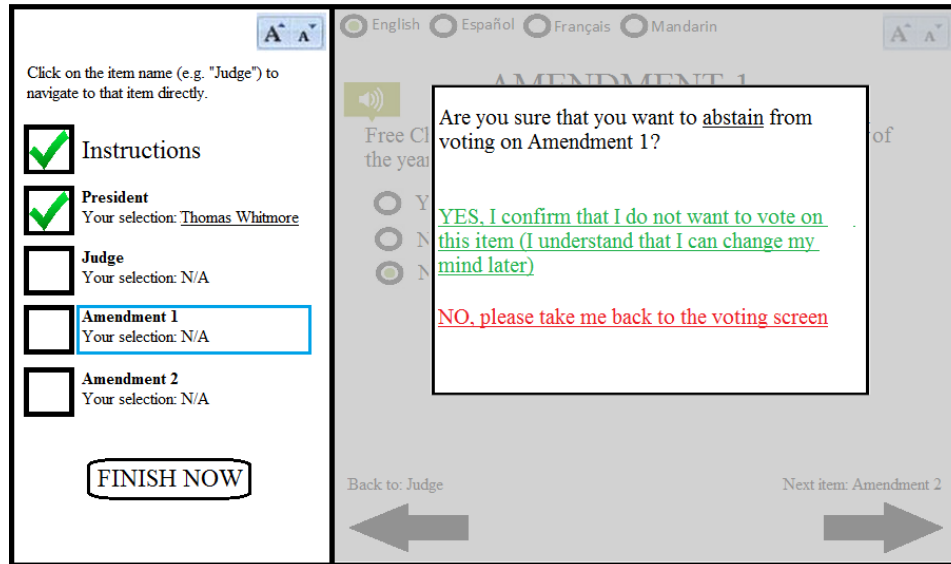


Figure 11

You will be asked to confirm the vote (touch the green link) or to go back to the previous screen (Figure 10). If you decide to confirm “Abstain”, it will be confirmed just like any other vote:

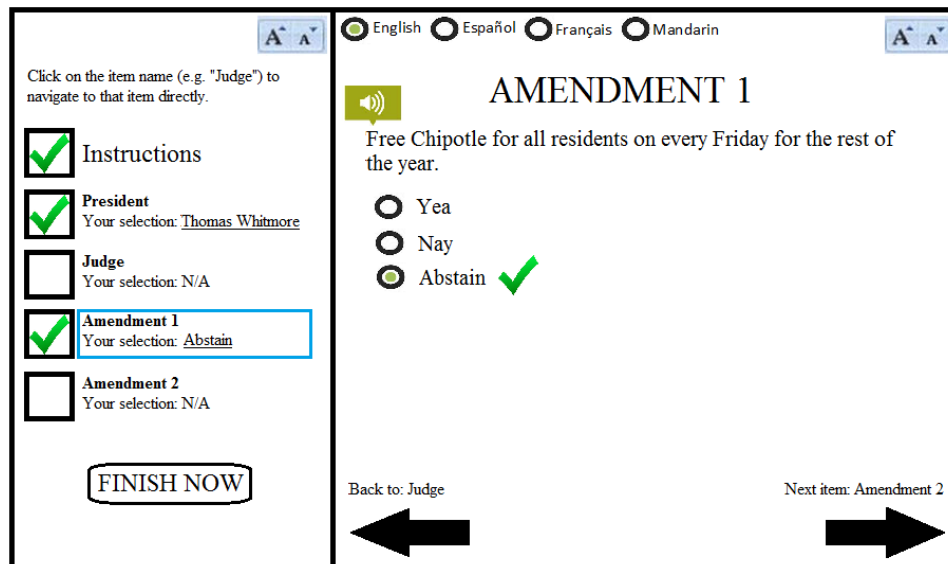


Figure 12

To proceed to the next item, you can touch the arrow in the bottom-right corner of the main screen:

Figure 13

If you have voted in all of the contests that you want to vote for, touch the “FINISH NOW” button. If you click “FINISH NOW” and some contests have not been voted in, a pop-up will alert you to those contests:

Figure 14

If you would like to go back to the previous screen (perhaps to vote in some of the contests that you have left blank), touch the red link. If you would like to abstain from each of those contests (that is, you want to skip them and leave them unanswered), touch the green link; you will then be taken to the ballot summary:

Click on the item name (e.g. "Judge") to navigate to that item directly.

<input checked="" type="checkbox"/>	Instructions
<input checked="" type="checkbox"/>	President Your selection: <a href="#">Thomas Whitmore</a>
<input checked="" type="checkbox"/>	Judge Your selection: <a href="#">Abstain</a>
<input checked="" type="checkbox"/>	Amendment 1 Your selection: <a href="#">Abstain</a>
<input checked="" type="checkbox"/>	Amendment 2 Your selection: <a href="#">Abstain</a>

## BALLOT SUMMARY

**President:** [Thomas Whitmore](#)  
**Judge:** [Abstain](#)  
**Amendment 1:** [Abstain](#)  
**Amendment 2:** [Abstain](#)

If these selections reflect your voting choices, click "Proceed" to officially cast your ballot.

If you need to change a vote, click on the appropriate item from the list on the left or scroll back through the ballot using the arrows at the bottom of the page.

Back to: Amendment 2

Proceed

Figure 15

Notice that every box in the table of contents is checked off now because you have cast "Abstain" for each of the remaining unanswered contests.

This screen summarizes every vote that you have made on this ballot and allows you one last opportunity to go back to previous contests (if you need to make changes). If your votes are satisfactory, touch the green arrow at the bottom-right of the screen to formally cast the ballot:

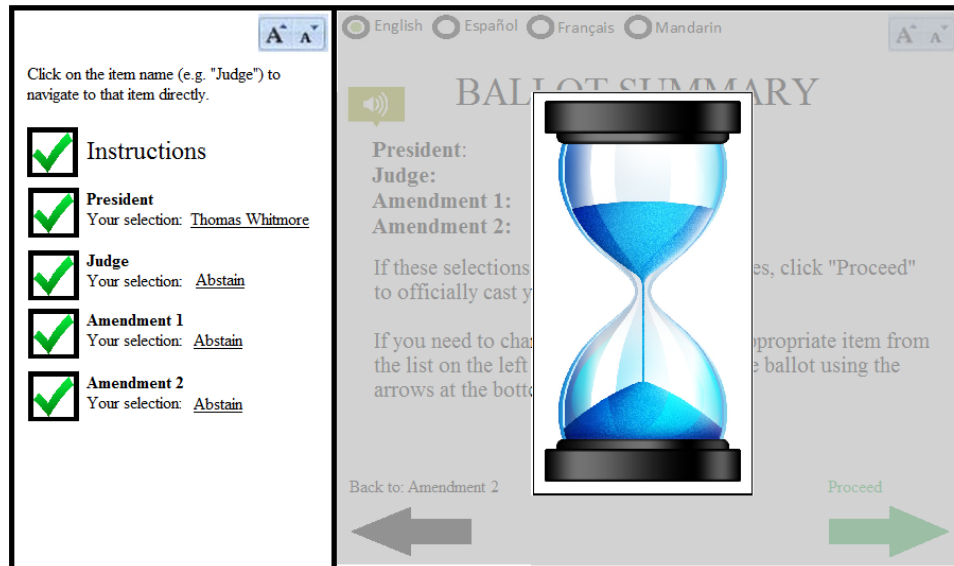


Figure 16

You will have to wait a few moments while the ballot processes...

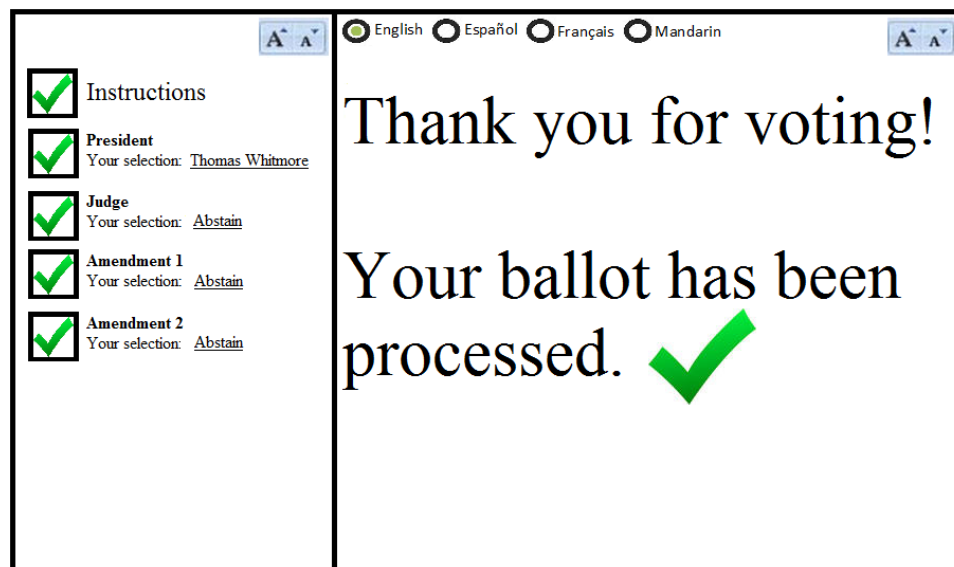


Figure 17

When you see this screen, your ballot will have been officially processed.